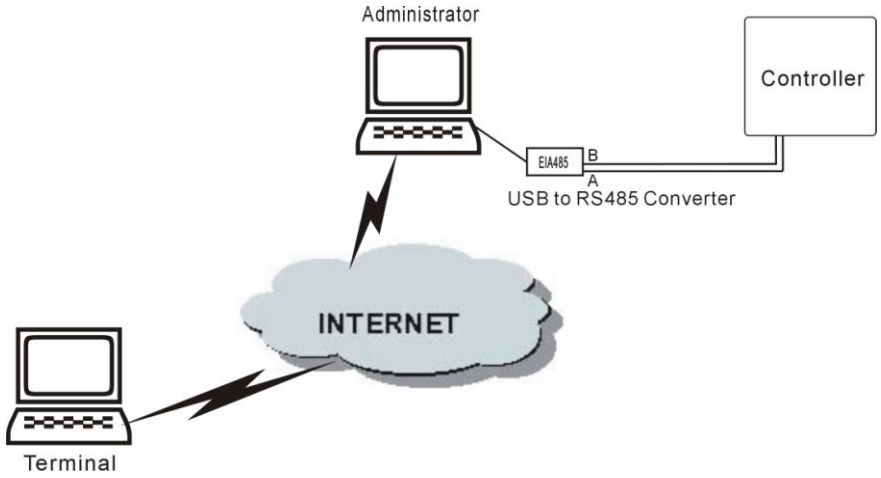
Monitor System
for Separated Pressurized Solar System

Software user manual



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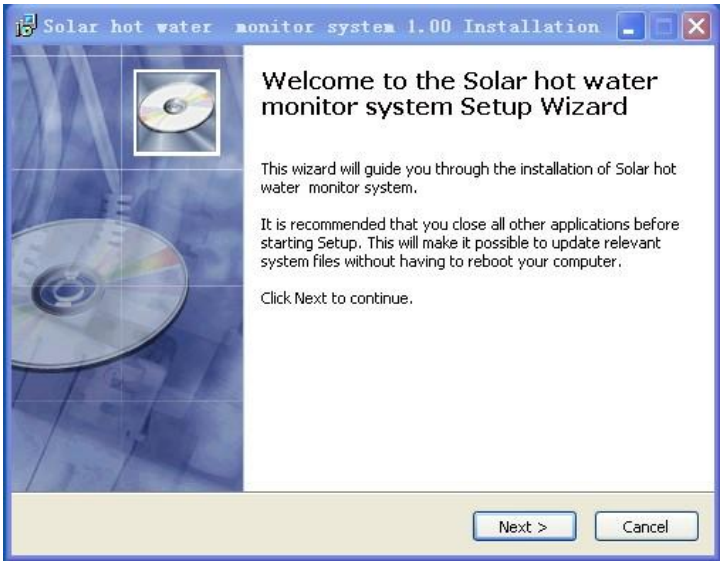
Chapter 1 Install and delete software

1.1 Software installation

Running setup.exe, and finish installation following the instructions。


Solar hot water monitor system 1.00 Installation
Welcome to the Solar hot water monitor system Setup Wizard
This wizard will guide you through the installation of Solar hot water monitor system.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

1.2 Software delete

Select “uninstall solar hot water remote monitor system” from software package, or through “control panel - delete/install software” option and select the delete software “solar hot water remote monitor system” to delete this software from your computer.

Chapter 2 Software startup and setup

2.1 Software startup

Click the shortcut

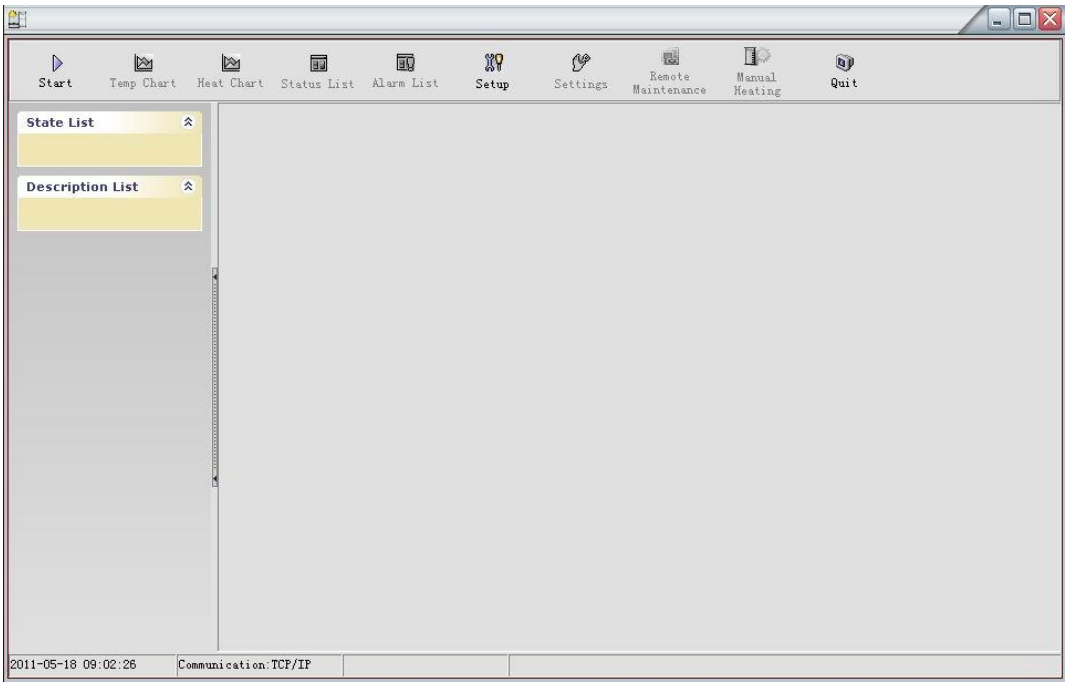
on desktop，or through “All program” and select “solar hot water remote monitor system” to start the software.

2.2 Select controller model

Select the desired controller type from expand menu, and then click OK to enter program.

2.3 Software setup

After software startup, following picture shows on the screen and setup the controller firstly.

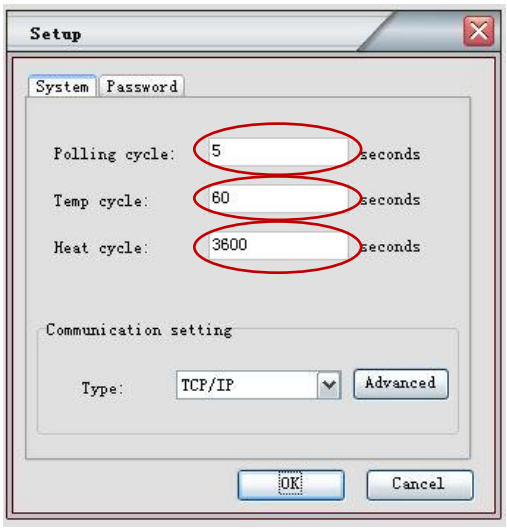


Main controlling window

2.3.1 System setup

► click main menu

button, open the setup interface window.



- **Polling cycle**: to set the frequency that computer communicates with controller, cycle time is more short, then the frequency is more quick, recommend to set 5~10 seconds.
- **Temp cycle**: to set the data collection frequency (temperature), cycle time is shorter; the collection frequency is denser, recommend to set > 60 seconds.
- **Heat cycle**：to set the data collection frequency (thermo energy calculation), cycle time is shorter, the collection frequency is denser, recommend to set > 60 seconds.

2.3.2 Communication setup

This system supports 2 communication interfaces: series interface and TCP/IP interface. If controller is connected by series interface, then communication must select “series”, if controller is connected through RS232 to TCP device, then communication must select “TCP/IP”. Click “Set” button to set detailed baud rate parameters for series interface, for TCP/IP, IP address and port number of controller should be set.

For Series interface: default baud rate 4800, data bit 8, stop bit 1, no parity check

Note: selection of communication interface must be kept same interface with VCPI or with controller.

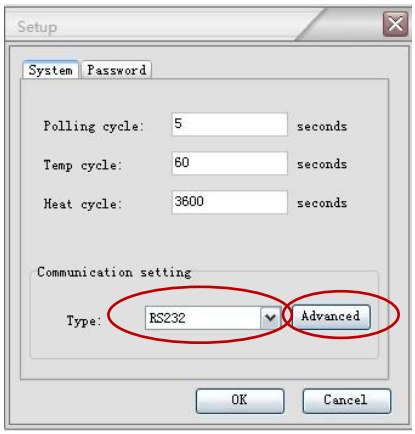
Setup steps:

► Click main menu

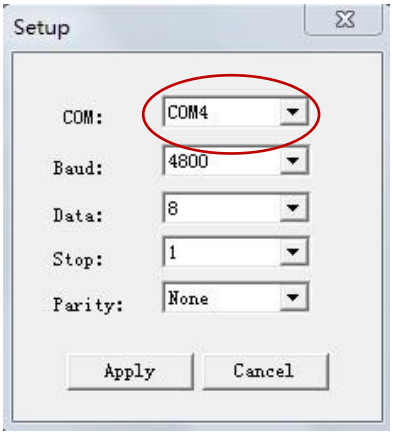
, open setup window，select communication interface, picture 1 “RS232”.

► Click “Advanced” option, enter picture 2 window.

► Select communication interface “COM X” (VCPI should be same like the interface of controller)



Picture1



Picture 2

Note: TCP/IP interface: please reference relevant TCP/IP module.

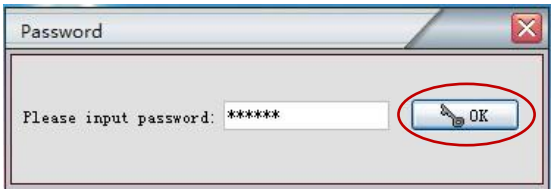
2.3.3 Password change

For setting the parameters of controllers password should be input firstly. After inputting the right password, you can continuous setting, here describe how to change the password. (**Note**: system default password is 123456)

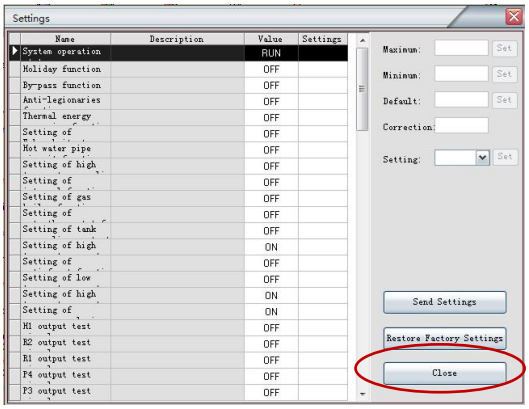
►Click main menu

button, to appear password input window.

► Input right password, then click “OK” button.



►Enter “parameter setup” window

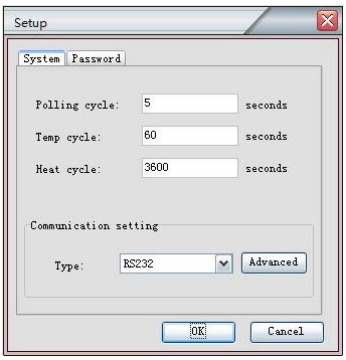


► Input the desired parameters, then click "Close” to exit password changing process.

Under the standby status of system, click

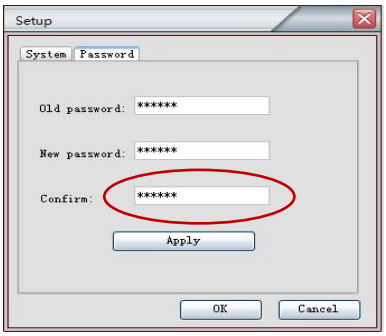
button

► Access window of communication setup and password changing

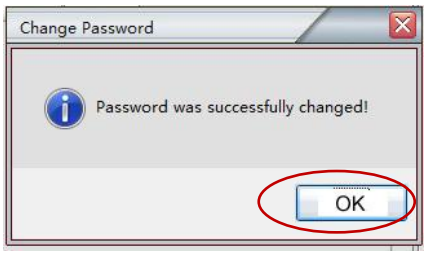


►Click "password" option, enter password setup window.

►Enter old password firstly, then enter new password and confirm the new password.



►Then click “Apply”，and appear “change password” window



► Click “OK”, automatically return to the password setup window.

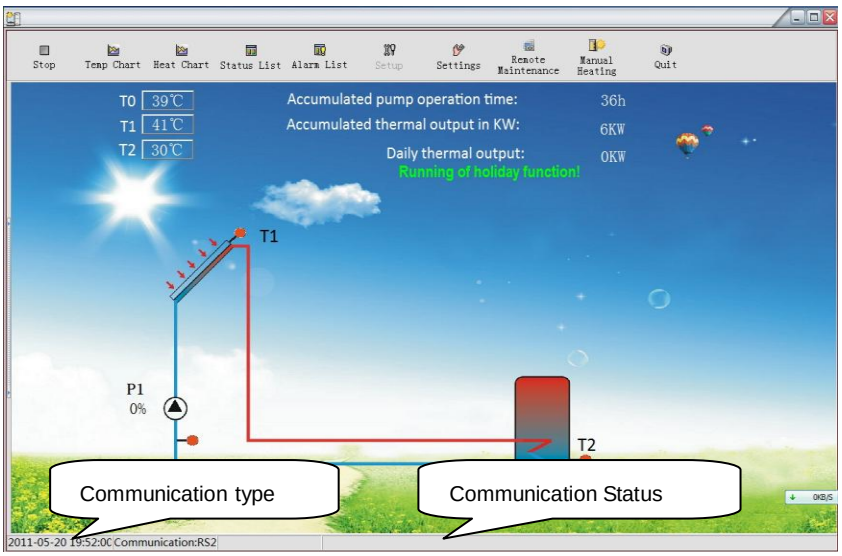
►Click “OK” and password is changed successfully.

Chapter 3 Using software

3.1 Start /Stop

After software startup and correct setup, be sure to well connect the computer and the controller, click “

” menu, software will communicate with controller automatically, then corresponding system information shows on the monitor screen, see picture below.

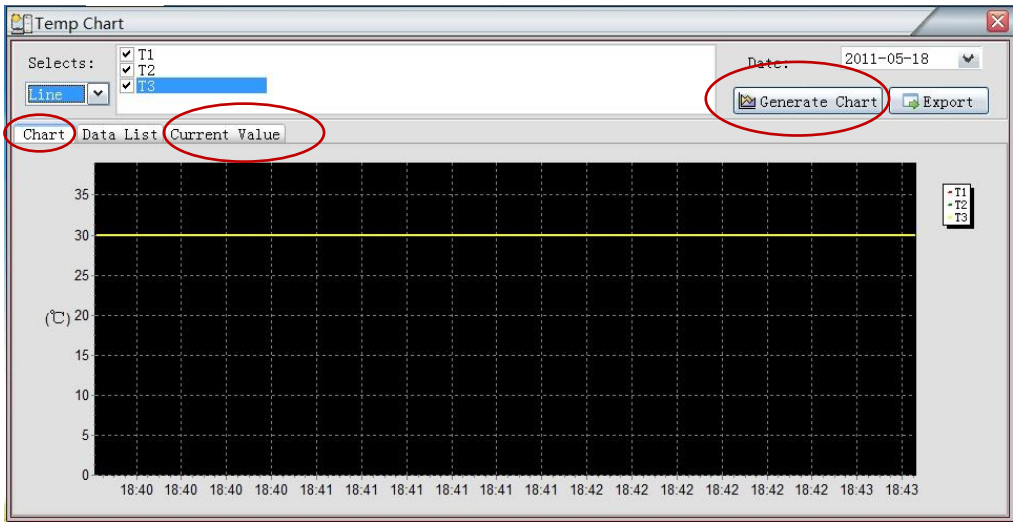


At the bottom status bar, besides display current time, the communication way and status displayed also, When there is communication error, “Communicate error” warning will displays on the status area.

“Start/Stop” button are switched to each other reversely, when you press start button, then this button changes to stop button, repress the button, it means to stop monitor process, then all temperature and warning information will not record any more.

3.2 Temperature curve

Click “ Temp Chart ” button to open the temperature counting window, in this window interface, different temperature curve, temperature list, and current temperature value are showed. see picture below：



In above part of this interface, user can select which temperature and at what time’s value you want to see, selected value will be saved automatically, then press “Generate chart” to get temperature curve, different temperatures curve are distinguished with different color,

At “Date List” the detailed temperature value is showed. “Current value” shows the current temperature value of all temperature sensors.

- **Temperature curve interface introduction:**

Temperature sensor selection zone: here temperature sensor can be selected, “√

“ indicates to be selected, once a sensor is selected, then when you open the temperature curve next time, this sensor becomes a default selected sensor, (**Note**: for different type of sensor, its corresponding temperature selection zone is different.)

Enquiry time: within the operation period, this controller will automatically record the value of all connected temperature sensors, user can check the temperature value of sensor according to desired date, if the date is exceed the recorded operation period, then it is impossible to check. Default checking date is current data of computer; it can be selected according to requirement.

Diagram display type: two display ways are provided in this system, curve or column.

Generate chart: click this button to generate desired temperature curve or column and its temperature list.

Export: click this button to export temperature value in Excel file, and saved it in the computer, user can define the desired saving route.

- **Diagram/Value/Current temperature display zone**

►Click “Chart”, to see the temperature curve, X-axial indicates time (in minute), Y-axial indicates temperature (in ^{o}C). Temperature curve of every sensor is showed in different color.

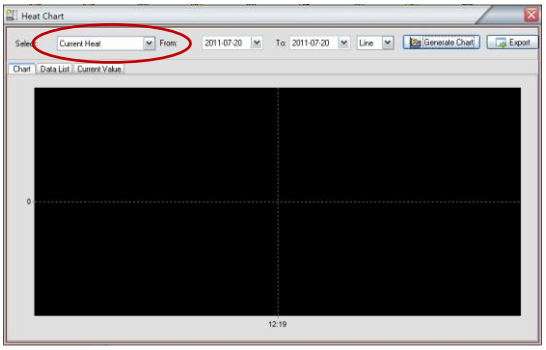
►Click “Data list”, to see the temperature list of every sensor at its recorded period.

►Click “Current Value", to display the current temperature value of sensors.

3.3 Thermo energy curve

Click main menu “

”button，appears thermal energy windows, it will show the thermal energy curve.



- **Ways of thermal energy calculation**: “Current heat” displays thermal energy produced currently, “Total heat” indicates the accumulated thermal energy, and default set is checking current thermal energy.
- **Enquiry time**: within the operation period, this controller will automatically record the value of the thermal energy produced by solar system, user can check the thermal energy according to the desired date, if the checking period is exceed the recorded operation period, then it is impossible to check. The start checking time must be lower than the end checking time. Default end checking time is the current time of computer, end checking time can also be selected.
- **Diagram display type**: two display types are provided in this system, curve or column.
- **Generate chart**: click this button to generate desired thermal energy curve or column and thermal energy value list.
- **Export**: click this button to export thermal energy in Excel file, and saved in the computer, user can define the desired saving route.
- **Diagram/Value/Current temperature display zone**

►Click “Chart”, to see the thermal energy curve, X-axial indicates time (in Minute), Y-axial indicates thermal energy (in KW).

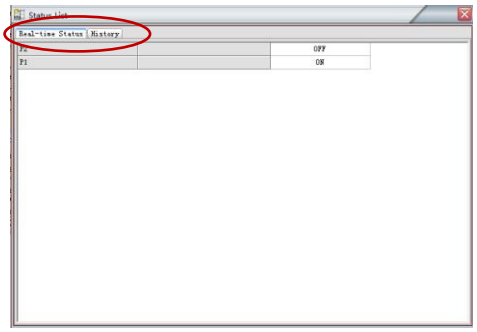
►Click “Data list”, to see the value list of thermal energy at its recorded period.

►Click “Current Value", to display the current value of thermal energy.

3.4 Running status

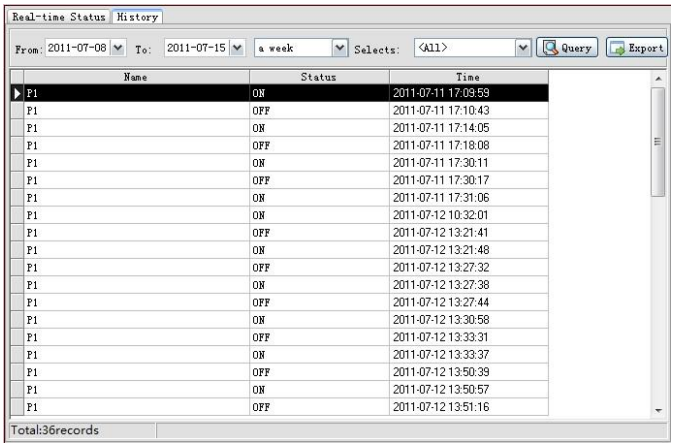
Click main menu status list

, appears running status window, in this interface, you can run “real-time” status and “history record” functions.



They display the current status of on/off relays and its history recorded operation status. History record can be exported to file saved.

- Real-time Status: display the current status of all controlled circuit pumps, on or off status.
- History: click “history”, appears below interface for relevant functions.

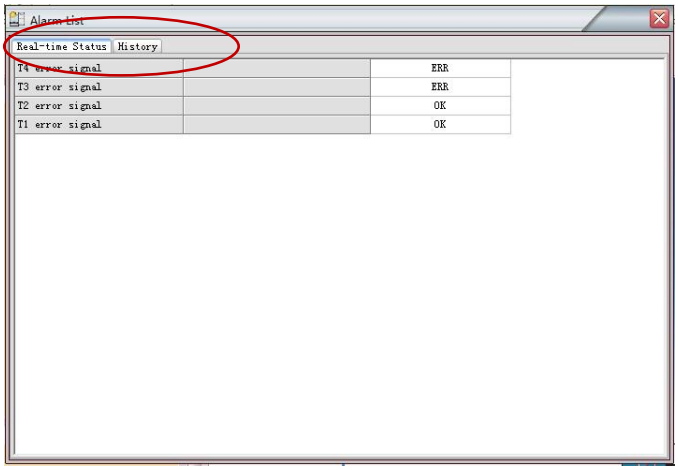


- **Checking time**: the start checking time must be lower than the end checking time. default end checking time is the current time of computer, end checking time can also be selected.
- **Quick checking**: user can use quick checking function to check the history value of a selected period; period option can be current time, day, week, month, three months, half year, and year.
- **Checking selection**: for different controller, quantity of circuit pump can be controlled is different, and listed object is different, user can select desired object or select all objects to check
- **Query:** click “query” button to get the history status list of the selected pump and time period.
- **Export**: click “export” to export history status in excel file, and this file can be saved in the customer pointed folder.
- **Status display:** display all current record.

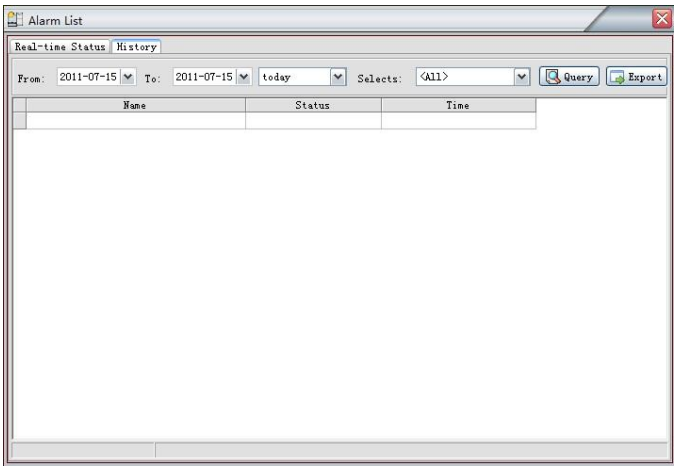
3.5 error checking

Click main menu alarm list button

, Alarm list window appears, in this window, you can run “real-time status” and “history” 2 submenu.



- **Real time Status**: click “Real-time Status”, the actual communication status of all connected sensors can be displayed, 2 status “OK” or “ERR” shows.
- **History**: click “History”, following window appears for checking.



- **Checking time**: the start checking time must be lower than the end checking time. default end checking time is the current time of computer, end checking time can also be selected.
- **Quick checking**: user can use quick checking function to check the history value of a selected period; period option can be current time, day, week, month, three months, half year, and year.
- **Checking selection**: for different controller, quantity of sensors is different, and listed object is different, user can select desired object or select all objects to check
- **Query:** click “query” button to get the history status list of the selected pump and time period.
- **Export**: click “export” to export history status in excel file, and this file can be saved in

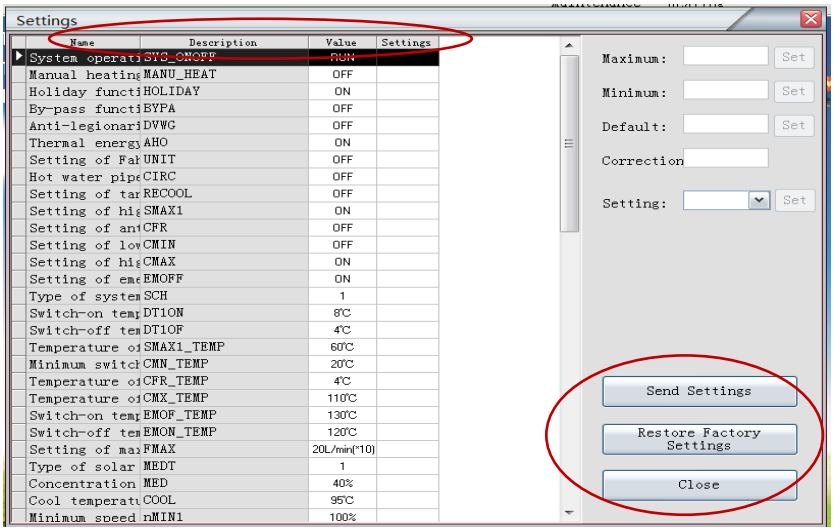
the customer pointed folder.

- **Status display:** display all current record.

3.6 Parameter setup

Click main menu “Setting” button

, appears setup window, input correct password, then you can set the parameters.



- Parameter setup window has 2 zones, left side is parameter set point display zone, and right side is parameter setup zone.

- **Parameter set point display zone:**

"Name" column：Display the detailed description of parameter.

"**Description" column**: corresponding parameter code.

"**Value" column**: current parameter value.

"**Settings" column**: current parameter set point value.

- **Parameter setup zone:**

Maximum: maximum value of parameter, once a parameter is selected, its maximum value displays here. (For some parameters, no value here)

Minimum: minimum value of parameter, once a parameter is selected, its minimum value displays here. (For some parameters, no value here)

Default: default value of parameter, once a parameter is selected, its default value displays

here. (For some parameters, no value here)

Setting: set point, user can set the desired value within its adjustable arrange, input a value, must click “set” to confirm it, (Note: Setup of “FMAX” parameter is different to other parameters, its input value = set value *10，that means if you want a flow rate is 2L/MIN, then here you should input value “20” and click “ set” to confirm).

► **Click “Send Settings” button:** All current parameters values set in this software are sent to controller, controller will use this value to control the operation of solar system.

►**Click “Restore Factory Settings” button**: All parameters values are recovery to factory set point.

►**Click “Close” button**: Exit the parameter setting.

Note：A correct, quick parameter setup is established on the condition that a qualified engineer is familiar with the operation manual of controller.

- Example:

Run the thermal energy measuring function and setup the corresponding parameters,

operation steps:

First step: find the corresponding parameter description from operation manual of controller, thermal energy measuring function has four correlated parameters.

1)OHQM Thermal energy measuring

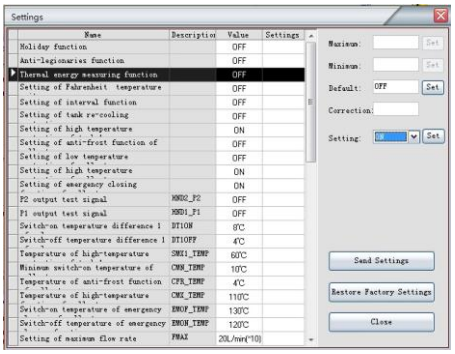
2)FMAX Flow rate

3)MEDT Type of heat transfer liquid

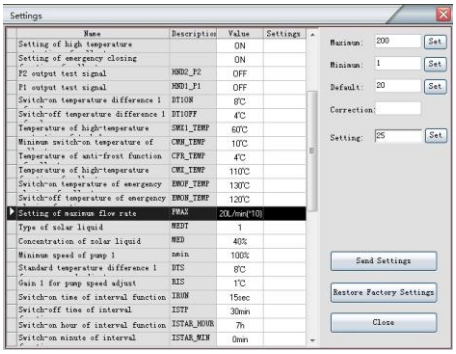
4)MED% Concentration of heat transfer liquid

Second step: find the corresponding parameter from setting window and input the correct value, see below picture.

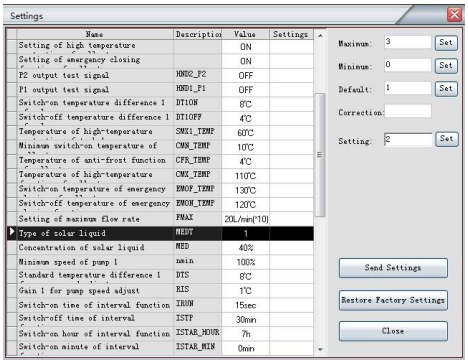
OHQM Thermal energy measuring setup



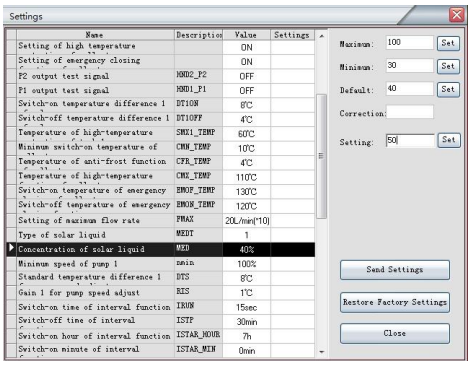
FMAX Flow rate setup



MEDT Type of heat transfer liquid setup



MED% Concentration of heat transfer liquid



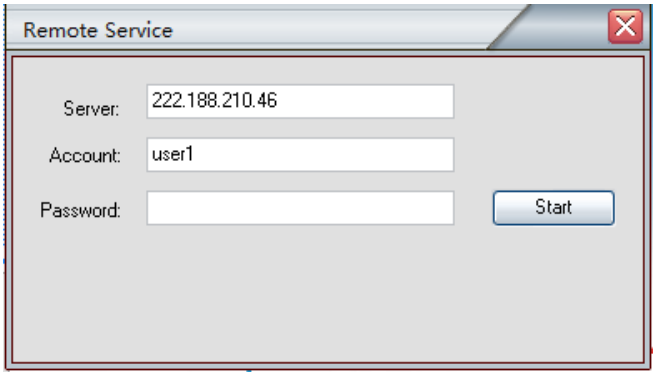
Third step：check the set whether it is correct, then click “send setting” and exit the setting window, complete setup.

3.7 Manual heating

3.7.1 Startup of remote maintenance

Click the main menu

button, bottom window appears.



Service: enter IP address"222.188.210.46"

Account: enter user account; user can register an account for its controller model in the server http://222.188.210.46:8000

Password：Enter the password, which given during the registration.

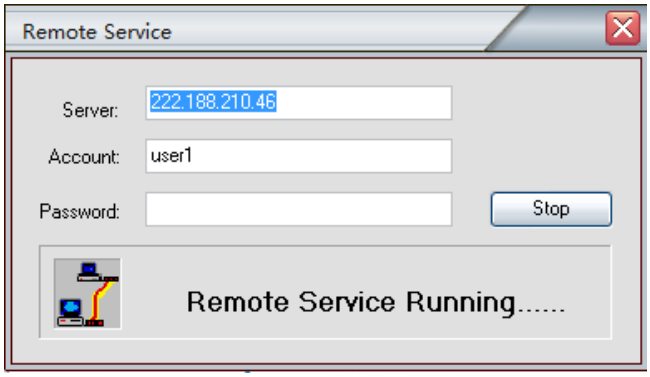
Confirm to enter the correct IP address, account and password, then click ”start" to connect controller to the server.

Once the controller is connected to the server, then you can login on the server http://222.188.210.46:8000 at any computer terminal, and with the correct login account and password you can make remote monitoring and maintaining with your controller.

3.7.2 Switch-off remote maintenance

Click the main menu

button, bottom window appears, then click “ Stop” to switch-off the connection to the server, then you close the remote maintenance function.



3.8 Quit program

Click main menu Quit button

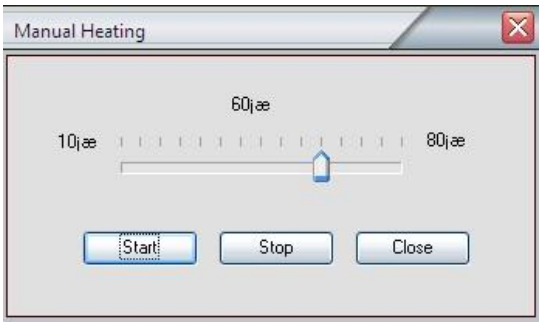
, following window appears.

► Click “Y” to exit program.

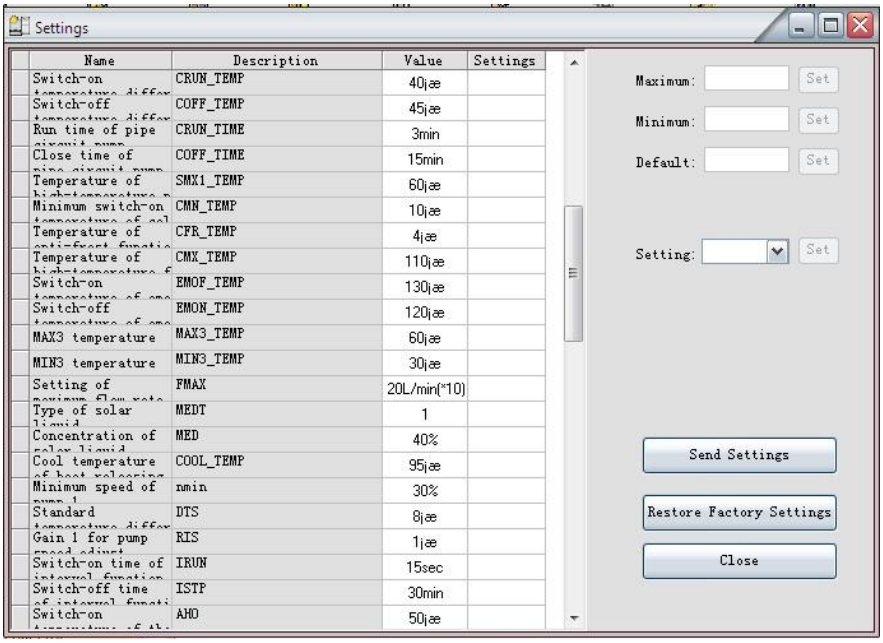
4.Frequently Asked Questions

Because user area and language is different,our software can appear some garbled in Microsoft Windows operating system, for example in the manual heating and system Settings dialog box appeared "jae" garbled replaced with the original "℃" symbol as follow charts.

EXAMPLE 1：



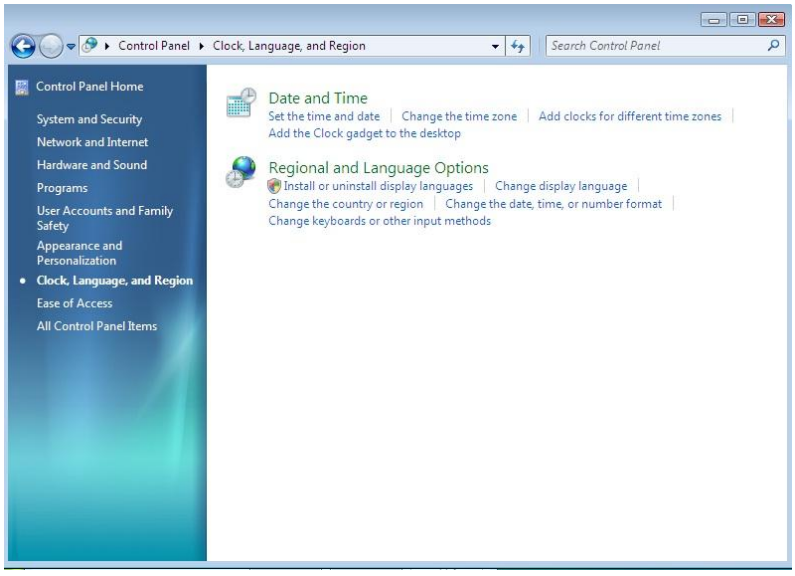
EXAMPLE 2：



Please according to the following procedures can solve the problem.

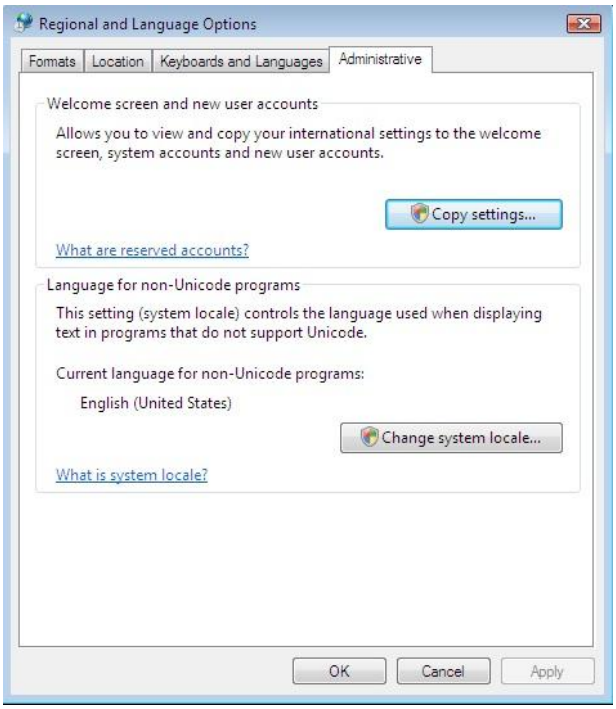
STEP 1：

Go into the control panel choose "language and regional" option, as the chart.


Control Panel ▸ Clock, Language, and Region
Search Control Panel
Control Panel Home
System and Security
Network and Internet
Hardware and Sound
Programs
User Accounts and Family Safety
Appearance and Personalization
Clock, Language, and Region
Ease of Access
All Control Panel Items
Date and Time
Set the time and date | Change the time zone | Add clocks for different time zones
Add the Clock gadget to the desktop
Regional and Language Options
Install or uninstall display languages | Change display language
Change the country or region | Change the date, time, or number format
Change keyboards or other input methods

STEP 2:

Enter "language and regional" panel and select the "Administrative" ,then select the button of "Change system locale" option, as the chart.


Regional and Language Options
Formats
Location
Keyboards and Languages
Administrative
Welcome screen and new user accounts
Allows you to view and copy your international settings to the welcome screen, system accounts and new user accounts.
Copy settings...
What are reserved accounts?
Language for non-Unicode programs
This setting (system locale) controls the language used when displaying text in programs that do not support Unicode.
Current language for non-Unicode programs:
English (United States)
Change system locale...
What is system locale?
OK
Cancel
Apply

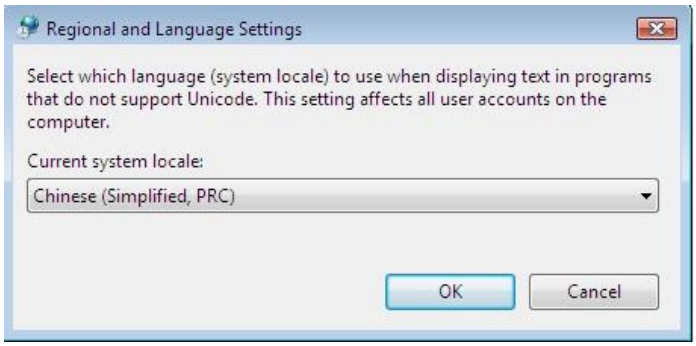
STEP 3:

Enter "language and regional" Settings panel, modify current value of "Current system locale:".

Regional and Language Settings
Select which language (system locale) to use when displaying text in programs that do not support Unicode. This setting affects all user accounts on the computer.
Current system locale:
English (United States)
OK
Cancel

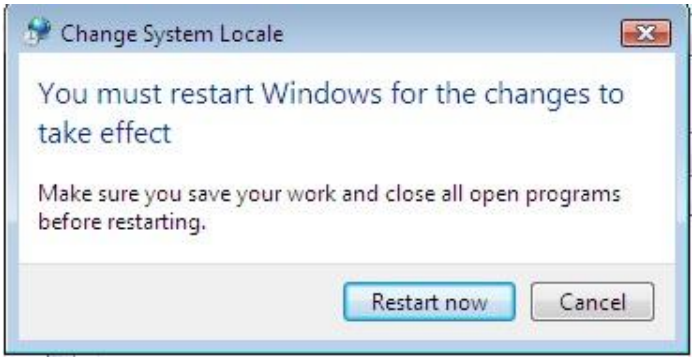
STEP 4:

Enter "language and regional" Settings panel, "current system locale:" the current value change as follows:


Regional and Language Settings
Select which language (system locale) to use when displaying text in programs that do not support Unicode. This setting affects all user accounts on the computer.
Current system locale:
Chinese (Simplified, PRC)
OK
Cancel

STEP 5

After modification it,Restart computer.


Change System Locale
You must restart Windows for the changes to take effect
Make sure you save your work and close all open programs before restarting.
Restart now
Cancel